Title (en)

DEVICES, SYSTEMS, AND METHODS FOR REMOVING HEAT FROM A NUCLEAR REACTOR CORE

Title (de)

VORRICHTUNGEN, SYSTEME UND VERFAHREN ZUR ENTFERNUNG VON WÄRME AUS EINEM KERNREAKTORKERN

Title (fr)

DISPOSITIFS, SYSTÈMES ET PROCÉDÉS D'ÉLIMINATION DE LA CHALEUR D'UN COEUR DE RÉACTEUR NUCLÉAIRE

Publication

EP 4252256 A1 20231004 (EN)

Application

EP 21831464 A 20211029

Priority

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- US 2021072105 W 20211029

Abstract (en)

[origin: US2022139581A1] A heat pipe configured to remove heat from a nuclear reactor core is disclosed herein. The heat pipe can include an inner housing defining an inner volume configured to accommodate a heat source and an outer housing configured about the inner housing and the heat source. A wick can be positioned between at least a portion of the inner housing and at least a portion of the outer housing, wherein the wick can include a capillary material, and wherein the wick can define an intermediate volume between the inner housing and the outer housing. A working fluid can be positioned within the intermediate volume, wherein the working fluid can evaporate at a first end of the heat pipe and condense at a second end of the heat pipe adjacent to a heat exchanger, and wherein the wick can return condensed working fluid to the first end of the heat pipe.

IPC 8 full level

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CPC (source: EP KR US)

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